

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF APPEALS

Appellant's Name:	)	
SMITH ET AL.	)	
Serial No. 10/760,996	)	Atty. Docket No.:
	)	72212
Filing Date: JANUARY 20, 2004	)	
	)	Art Unit: 2646
Confirmation No. 1657	)	
	)	
For: TECHNIQUE FOR INDEPENDENT	)	Examiner:
GROUND FAULT DETECTION OF MULTIPLE	)	WALTER F. BRINEY, III
TWISTED PAIR TELEPHONE LINES	)	
CONNECTED TO A COMMON ELECTRICAL	)	
POWER SOURCE	)	

REPLY BRIEF UNDER 37 CFR § 41.41

**EFILED**

MS Appeal Brief-Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This is in response to the Examiner's Answer mailed November  
15, 2006.

\*\*\*\*\*

In Re Patent Application of:

**SMITH ET AL.**

Serial No: **10/760,996**

Filing Date: **01/20/2004**

---

**STATUS OF CLAIMS**

Twenty-nine claims have been filed in the present application. Of these twenty-nine claims, claims 1-14, 19, 20, 25 and 26 have been cancelled. All of the remaining claims (15-18, 21-24 and 27-29) stand rejected. The claims on appeal are rejected claims 15-18, 21-24 and 27-29.

In Re Patent Application of:

**SMITH ET AL.**

Serial No: **10/760,996**

Filing Date: **01/20/2004**

---

### GROUND OF REJECTION

Claims 15-18, 21-24 and 27-29 stand rejected under 35 U.S.C. § 103 as being unpatentable over Figure 1 and paragraphs [02] and [03] of the present specification in view of the cited patent to Takeshita et al. 4,385,336. These rejections are the subject of the Appeal Brief filed on or about September 15, 2006, and the Examiner's Answer mailed November 15, 2006.

This Reply Brief responds to certain new issues raised by the Examiner in the Examiner's Answer.

In Re Patent Application of:

**SMITH ET AL.**

Serial No: 10/760,996

Filing Date: 01/20/2004

---

### ARGUMENT

In the Examiner's answer, the Examiner raises certain new issues which necessitate a response on the part of the Appellants.

On page 9 of the Examiner's answer, the Examiner purports to rebut the assertions of the Appeal Brief that recognition of a problem of using "multiple central office transceivers connected to a common power source" is actually part of Appellants' invention. The Examiner lists four reasons why this is not convincing, as follows:

"The chief problems with appellant's contention are that: (1) the use of multiple transceivers is indicated in the 'Background of the Invention,' and not introduced in the summary or detailed description of the invention; (2) the appellant does not include a figure of multiple transceivers merely connected to a common span power bus, but rather multiple transceivers connected with ground fault detect circuits, which obviate the problems discussed in paragraph [03]; (3) appellant uses language in paragraph [03] to indicate that providing multiple transceivers to a common span powered bus was well-known, e.g. 'it is often desirable for multiple central office transceiver units to derive span power for their respective remote transceiver units from a common or shared electrical power source;' (4) appellant discloses in paragraph [05] of the specification that, 'the present invention is directed to a methodology and subsystem architecture for detecting the occurrence of a ground fault in a multiple, span-powered telecommunication network,' which presupposes such a network."

With respect to item (1), statement in the 'Background of the Invention' is not an absolute admission of prior art. In Re

In Re Patent Application of:

**SMITH ET AL.**

Serial No: **10/760,996**

Filing Date: **01/20/2004**

---

Hunter, 48 C.C.P.A. 822; 286 F.2d 619; 128 U.S.P.Q. 544 (CCPA, 1961); In Re Hellsund, 59 C.C.P.A. 1382; 474 F.2d 1307; 177 U.S.P.Q. 170 (CCPA, 1973); Johns-Manville Corporation v. Guardian Industries Corporation, 586 F. Supp. 1034; 221 U.S.P.Q. 139 (D.C. MI, 1983).

With respect to item (2), Appellants do include a Figure of multiple transceivers connected to a common span power bus. See Figure 3.

With respect to item (3), the Examiner asserts that Appellants use language to "indicate that providing multiple transceivers to a common span power bus was well known." The Examiner then quotes from paragraph [03] of the specification where it states:

"It is often desirable for multiple central office transceiver units to derive span power for their respective remote transceiver units from a common or shared electrical power source."

The statement referred to by the Examiner is ambiguous at best and does not rise to the level of a prima facie showing of prior art.

With respect to item (4), the Examiner states in the last two lines the following:

"Granting (4)--that the appellant actually invented the multiple, span-powered telecommunication network--begs the question: where is the supporting disclosure?"

The answer to the question is that the supporting disclosure is

In Re Patent Application of:

**SMITH ET AL.**

Serial No: **10/760,996**

Filing Date: **01/20/2004**

---

in Figure 3.

Beginning at the bottom of page 9, and carrying over to the top of page 10, the Examiner states:

"It is not surprising that appellant did not actually invent coupling multiple transceivers to a common power bus since the original claims were directed solely toward the subcombination, i.e. the ground fault detector for use in such an environment. The shift in focus to the combination being permissible only in view of the fact that the now claimed combination includes all limitations of the originally presented subcombination, which is what the appellant's invention truly is.

Within pages 15-18, appellant further alleges that only appellant recognizes the ground fault problem, and that the section of paragraph [03] explaining the ground fault problem is solely the pontification of the appellant. However, as shown above, the appellant is mistaken in alleging that paragraph [03] is his own."

By statute, a determination of what the claimed invention is, belongs to the Appellants and not the Examiner. See 35 U.S.C. § 112, second paragraph. Accordingly, the Examiner is not in a position, by statute, to tell the Appellants what the Appellants' invention is.

On page 10, beginning line 10, the Examiner states:

"The above notwithstanding, appellant's allegation is rendered moot by Takeshita's identification of the ground fault problem in current supplying circuits in a subscriber circuit, which corresponds to a central office transceiver. It is true, that Takeshita may not recognize that ground

In Re Patent Application of:

**SMITH ET AL.**

Serial No: **10/760,996**

Filing Date: **01/20/2004**

---

faults on one subscriber line will effect other subscriber lines since there is no disclosure of a common power bus, but Takeshita does motivate the use of a ground fault detector for other reasons, like protection against damage. See column 1, lines 6- 12. In this way, it is clear that knowledge of ground faults was known at the time of the invention."

In the material quoted above, the Examiner is equating a "current supplying circuit in a subscriber circuit" with a "central office transceiver." That is simply factually incorrect.

This error is repeated and compounded on page 13, beginning line 2 where the Examiner states:

"However, column 1, lines 6-9, recite: 'the present invention relates to current supplying circuits for use in a subscriber circuit,' i.e. not in a terminal but the notoriously well-known subscriber line interface circuit (SLIC), 'for supplying speech signals to a subscriber terminal, in a telephone exchange or the like.' This makes it clear that the subscriber circuit is in a telephone exchange, i.e. central office."

A SLIC is a circuit on the exterior of a building which terminates the incoming twisted pair from the central office and provides an interface to telephone scribe sets within the building. Thus the Examiner's conclusion that the subscriber circuit "is in a telephone exchange, i.e. central office" is wrong. Column 1, lines 13-18 of Takeshita et al., states:

"The telephone exchange has had its control section electronically developed for low cost, small size and reliability, but the subscriber circuit directly interfacing with

In Re Patent Application of:

**SMITH ET AL.**

Serial No: 10/760,996

Filing Date: 01/20/2004

---

the subscriber terminal is not electronically developed as yet. Particularly, semiconductor ICs (integrated circuits) are not employed for such a circuit."

This clearly indicates the subscriber terminal is not located at the telephone exchange but rather at the remote location. A typical subscriber terminal might be a telephone handset or a DSL receiving terminal such as item 230 shown in Figure 3.

The circuits shown in the drawings of Takeshita et al. are circuits at the remote (remote from the central office) end of the twisted pair and definitely not at the central office as the Examiner has stated.

Returning to the second quote from page 10 of the Examiner's answer, the Examiner acknowledges that Takeshita et al. do not recognize that ground faults on one subscriber line will effect other subscriber lines since there is no disclosure of a common power bus.

On page 11 of the Examiner's answer, the Examiner states:

"On page 21, lines 18-19, the appellant appears to suggest that the multiple segment span-powered system is prior art. **Clarification for the record of the appellant's stance should be provided in a Reply Brief.**"

The position taken in the rest of this Reply Brief should have adequately clarified what Appellants' position is. Nevertheless, with respect to lines 18 and 19 of page 21, the system shown in Figure 1 is prior art. Neither the single span-powered system of that Figure nor the multiple segment span



In Re Patent Application of:

**SMITH ET AL.**

Serial No: **10/760,996**

Filing Date: **01/20/2004**

---

powered system, described in the first portion of paragraph [03] addresses the problem of the mis-operation of a multiple segment system that results from the occurrence of a ground fault in an individual one of the multiple segments. If the Examiner is proposing that other issues be clarified, Appellant is unaware of what requires clarification and requires additional explanation from the Examiner in order to be able to better respond.

On page 12 of the Examiner's answer, the Examiner states:

"On page 22, lines 3-15, appellant alleges that the invention of claim 21 does not reside in the central office."

The invention is described in the claim language. Taken in the context of the claim language, the quoted phrase should be interpreted to mean that the novelty of the claims does not reside in locating a particular piece of equipment in the central office. In fact, the ground fault detect circuits of the DSL transceivers may be located at the central office or at a intermediate distribution point where a power bus provides the power to a plurality of transceiver units serviced by the intermediate distribution points.

On page 13 of the Examiner's answer, in the first full paragraph, the Examiner asserts that "controlling the internal resistance" is equivalent to isolating a wireline segment. The Examiner's interpretation is at odds with the Takeshita et al. reference. In the reference, the function of increasing the resistance is to limit current flow and reduce power consumption. See column 3, lines 44-53. The function of limiting current implies that some current continues to flow, or in other words, that there is no "isolation" of the circuit segments.

In Re Patent Application of:

**SMITH ET AL.**

Serial No: **10/760,996**

Filing Date: **01/20/2004**

---

Accordingly, the Examiner's interpretation of the Takeshita et al. reference is incorrect.

For the reasons indicated, Appellants respectfully request that the Examiner reconsider his rejection and allow the application to issue as a patent.

If any additional extensions and/or fees are required, authorization is given to charge Deposit Account No. **01-0484**.

Respectfully submitted,



---

David L. Stewart  
Reg. No. 37,578

Telephone No. 407-841-2330

Customer No. 27975